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10/529,627	07/11/2005	Philippe Rocquet	123274	1989
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EXAMINER				
ARNOLD, ERNST V				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,627

Applicant(s)

ROCQUET, PHILIPPE

Examiner

ERNST V. ARNOLD

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
4a) Of the above claim(s) 6-8, 12-15, 19-24, 28-32 and 34-37 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 9-11, 16-18, 25-27, 33, 38 and 39 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/11/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claims 1-39 are pending.

Applicant's election of species with traverse filed on 2/7/08 is acknowledged. Applicant traversed that the cited reference does not teach the instant 3:1 ratio. The Examiner cannot agree because the Examiner has demonstrated in the restriction requirement that the ratio is taught by the cited reference. Applicant's arguments are not persuasive and the restriction is made FINAL.

Claims 1-5, 9-11, 16-18, 25-27, 33, 38 and 39 are under examination. Claims 6-8, 12-15, 19-24, 28-32 and 34-37 are withdrawn from consideration as being directed to non-elected subject matter.

Comment: On page 1, line 1, please insert the continuity data.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

Foreign language references submitted on 7/11/05 have only been considered to the extent that an English language equivalent has been supplied to the Examiner. References without an English language Abstract or equivalent have been lined through and not considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites the broad recitation from 2 to 14%, and the narrow recitation of preferably 8 to 12% by weight of said aerating agent, broad recitation from 0.5 to 10%, and the narrow recitation of preferably 3 to 5% by weight of said catalyst, and broad recitation from 12 to 60% by weight, and the narrow recitation of preferably from 23 to 42% of said regulating agent.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since

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the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 26 recites the broad recitation 30 to 70%, and the claim also recites 40 to 60% which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9-11, 16, 17, 25, 26, 38 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukii et al. (EP 0639331 A2).

Tsukii et al. et al. disclose an insecticidal and acaricidal smoke fumigant formulation, which comprises: (A) 1 part by weight of granules A comprising 5 to 20

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parts by weight of at least one pyrethroid compound (reads on instant claim 38 and since it is in the granule it reads on instant claim 39) as an active ingredient; 10 to 20 parts by weight of at least one inflammable substance selected from the group consisting of celluloid and polyvinyl nitrate; and 5 to 50 parts by weight of at least one organic blowing agent selected from the group consisting of azodicarbonamide, dinitrosopentamethylenetetramine and azo bisisobutyronitrile, the bulk specific gravity of the granules A being 0.3 to 0.9, preferably 0.3 to 0.6; and (B) 0.5 to 4 parts by weight, preferably 1 to 3 parts by weight, of granules B comprising 10 to 20 parts by weight of potassium perchlorate, 3 to 8 parts by weight of potassium nitrate and/or 1 to 5 parts by weight of potassium chlorate, (thus there can be $20 + 8 + 5 = 33$ parts chlorates and nitrates and reads on instant claims 25 and 26) 7 to 20 parts by weight of at least one burning agent selected from the group consisting of starch, lactose, cellulose, sucrose, glucose, fructose and mannitol (reads on instant claims 16 and 17), 3 to 8 parts by weight of at least one heat generation-regulating agents selected from the group consisting of guanidine nitrate, dicyandiamide, phosphoric guanylurea and guanidine sulfamate, 15 to 30 parts by weight of at least one perchlorate-decomposing aid selected from the group consisting of potassium chloride, triiron tetroxide, sodium chloride, copper oxide, chromium oxide, iron oxide (**aerating agent**), iron chloride, active carbon and ferrocene and 20 to 50 parts by weight of at least one inorganic filler selected from the group consisting of aluminum oxide, clay (**catalyst/regulating agent**), perlite, diatomaceous earth and talc (**aerating agents**), the bulk specific gravity of the granules B being 0.5 to 1.1, preferably 0.6 to 1.0 (page 2, lines 16-34 and claims 1-8).

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The mixing ratio of granules A and granules B is 1 to 0.5-4 (Claim 1). Kaolin clay is a **catalyst/regulating agent** (anticipating instant claims 9-11) and is used in Example 1 (page 3, line 40). Pyrethroid compound is an **active ingredient**. Potassium perchlorate and potassium chlorate are **oxidizing agents**. Starch is a **reducing agent**. The instantly claimed mineral filler comprises at least one aerating agent, one catalyst and one regulating agent and that limitation has been met by the disclosure. The ratio by weight of oxidizing agents and reducing agents can be 20 parts potassium perchlorate + 3 parts potassium nitrate and 1 part potassium chlorate to 8 parts starch for a ratio of $24/8 = 3/1$. Instant claim 1 is thus anticipated and it follows from the above disclosure that instant claims 2-5, 9-11, 16, 17, 25, 26, 38 and 39 are also anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Claims 1-5, 9-11, 16-18, 25-27, 33, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukii et al. (EP 0639331 A2) in view of Radulescu et al. (US 3,956,849).

Applicant claims a smoke composition.

Determination of the scope and content of the prior art

(MPEP 2141.01)

The reference of Tsukii is discussed in detail above and that discussion is hereby incorporated by reference.

Radulescu et al. teach smoke compositions and teach in column 6, lines 15-31:

	Mixture II	Mixture III
andiamide	35% dicyandiamide	35% dicyandiamide
onium nitrate	54% ammonium nitrate	54% ammonium nitrate
	10% kaolin	10% silica

The three can were then simultaneously heated on a single heating plate. It was observed that the reaction began first in the third container, then in the first and finally in the second. The percentage of each mixture converted to smoke was respectively, 80.5 for the third, 78.5 for the first, and 74.2 for the second, thereby indicating that the mixture containing silica produced the greatest output of smoke.

Radulescu et al. not only establish the equivalence of using kaolin and silica in smoke producing compositions but also teach using between 40 to 60% ammonium nitrate relative to the silica base.

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

1. The difference between the instant application and Tsukii is that Tsukii do not expressly teach silica as the aerating agent or sorbitol as the organic compound reducing agent or ammonium nitrate as the oxidizing agent present from 40 to 60% of the base. This deficiency in Tsukii is cured by the teachings of Radulescu et al. (US 3,956,849).

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

1. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use sorbitol, silica and ammonium nitrate present from 40 to 60% of the base, as suggested by Radulescu et al. in the composition of Tsukii et al., and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because: 1) Tsukii et al. already teach mannitol in the composition which render obvious sorbitol to one of ordinary skill in the art of chemical fumigation because mannitol and sorbitol are merely isomers of one another; 2) Tsukii et al. already teach potassium nitrate in the composition which would render obvious other nitrate salts such as ammonium nitrate which is taught by Radulescu et al. for the same purpose; and 3) Tsukii et al. teach diatomaceous earth, also known as kieselguhr, which is primarily silica, and also kaolin clay and Radulescu et al. provides the nexus teaching tying kaolin and silica together as

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functional equivalents in smoke compositions. Plus Radulescu et al. teach that silica/ammonium nitrate composition with 54% ammonium nitrate and 10% silica produces more smoke than kaolin which is further motivation to select silica over kaolin and in these amounts.

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976).

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernst V. Arnold whose telephone number is 571-272-8509. The examiner can normally be reached on M-F (6:15 am-3:45 pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ernst V Arnold/

Examiner, Art Unit 1616